BULLETIN OF
THE NEW YORK
ACADEMY OF MEDICINE

VOL. IX MAY, 1933 No. 5

EDITORIAL

THE MEDICAL LITERATURE OF FRANCE[1]

"To attempt to isolate the history of medicine from medical writings only," said Billings, "is like cutting a narrow strip from a piece of tapestry and speculating upon the origin and purpose of the cut threads of patterns that may be found in it." We must consider the warp as well as the woof, the woods as well as the trees. The comparative study of medical literature has shown conclusively that while the theoretic or pragmatic medicine of any country or period is contained in the basic texts and text books, the most realistic sidelights on its actual, every day status are to be gleaned from poets, dramatists, novelists and other practitioners of creative and imaginative literature. In the case of France, a huge hexagon of territory, largely isolated from the rest of Europe by oceanic and mountain barriers, the serious development of medicine was to be intermitted for centuries by the lengthy struggle for national unity out of a loose congeries of provincial areas, controlled by capricious feudal overlords. The end was well nigh attained under Philippe Auguste (1180-1223), ablest of the Capets, obliterated by the ineptitude of the Valois in the Hundred Years War over English claims to the crown (1337-1453) and not finally compassed until Louis XI effected fusion by subjugating his rebellious vassals (1481). The development of the French language out of decomposed Latin, by assimilation of exotic elements, corresponds roughly with this tedious integrative process, in which the energies of the Normans were deflected into

[1]Read at a meeting of the Romance Journal Club, Johns Hopkins University, Baltimore, on February 28, 1933.

the Crusades and the century of internecine warfare with England. There was the same waste of energy and money in the senseless wars of the Bourbons, with their consequence, the Revolution and the Napoleonic period, after which Republican France emerges as an administrative organization of eighty-three, eventually ninety departments, not unlike the states of the American union. The embryology and building up of nations in the Middle Ages was a painful, intricate process, seriously hampered by the Feudal System, and more easily and speedily accomplished in small countries, like England or Switzerland, than in larger areas, such as Germany or Italy, which did not attain to national unity until the year 1870.

The Latin medical literature of Italy dates back to the 11th century. That of France did not put in an appearance until 200 years later, while medical literature in the vernacular did not become consequential until after the invention of printing. Through the Latinization of the West and the conversion of the barbarians to Christianity, the medicine of the Dark Ages was to be monastic medicine, taught and cultivated by priests, who, along with the cold-storage plant at Byzantium, preserved the relics of the ancient learning. With the rise of the School of Salerno, South European medicine began to be secularized as a phase of university teaching. At the same time, it became Arabized, remaining under the sway of Islam up to the Renaissance, when people began to contact with reality, hence to think for themselves and so to express themselves in the mother tongue. Through the long, dreary middle period, the peoples of Europe were virtually nationless, "the indifferent children of the earth," as Shakespeare has it, and for a full thousand years after the downfall of the Western Empire, the medical literature of Europe was to be written and published mainly in Latin. From the development of the *lingua franca,* or pigeon French, out of Latin, Celtiberic, Moorish and Teutonic elements, came the *chansons de geste,* the *romans d'aventures* the *lais* and the *fabliaux,* to which we shall turn for a life-like picture of every day medicine in mediæval France[2]. As to the actual

medical teaching, the monkish and professional physicians in the same period, we have providentially an admirable geomedical survey of Western France in the Middle Ages by Dubreuil-Chambardel, published by the Société française d'histoire de la médecine in 1914[3].

Far from the four waterways and the military roads of mediæval France, hence relatively unaffected by the Norman invasion, stood the great basilica of Chartres, and here, at the end of the 10th century, Gerbert of Reims, with his pupils, Heribrand and Fulbert, taught and practiced medicine in the cloister schools attached to the cathedral. At the gates of Tours, on the right bank of the Loire, stood the Abbey of Marmoutier, a kind of mediæval university, which numbered among its medical students, the Angevin scholar, Marbodus, author of the celebrated therapeutic treatise on the virtues of stones (*liber de lapidibus*) and of other verses bearing upon medicine in the Abbé Migne's Patrologie. In the 8th century, the cloistral school attached to the basilica of St. Martin at Tours was directed by no less than Alcuin, who established in it a *scriptorium*, the best school of calligraphy in the Carolingean period. Among his pupils were Hrabanus Maurus, who wrote much on medicine and Hugo of Tours, who competes with Odo

---

[2]Oscar Kühn: Ueber Erwähnung und Schilderung von körperlichen Krankheiten und Körpergebrechen in altfranzösischen Dichtungen. 1. Teil. 8° Breslau, 1903. *Continued as*: Medizinisches aus der altfranzösischen Dichtung (Abhandl. z. Gesch. d. Med. VIII) 8° Breslau, 1904. *Also*: Franz Laue: Ueber Krankenbehandlung und Heilung in der Litteratur des alten Frankreichs. Göttingen diss. 8° Arnstadt, 1904. *Also*: Georg Manheimer: Etwas über die Aerzte im alten Frankreich nach mehreren alt-und mittelfranzösischen Dichtungen. Berlin diss. 8° Erlangen, 1890, (Roman. Forsch., Erlangen, 1891, VI, 581 *et seq*).

[3]L. Dubreuil-Chambardel: Les médecins dans l'ouest de la France au XIe et XIIe siècles. 8° Paris, 1914. For the clever grouping of provincial physicians, in which the French medical historians excel, see also: J. Roger: Les médecins normands du XIIe au XIXe siècle. 8° Paris, 1890-95. Les médecins bretons. 8° Paris, 1900. P. Delaunay: Vieux médecins mayennais. 8° Paris, 1903. E.-A. Begin: Lettres sur l'histoire médicale du nord-est de la France. 8° Metz, 1840. A. Cartaz: Les médecins bressans. 8° Paris, 1902. A. Lesfargues-Lagrange: Nos médecins bordelais. 8° Bordeaux, 1878, etc.

of Meudon as one of the possible authors of the well-known herbal, *De virtutibus herbarum,* assigned to Macer Floridus. So too, in the capitularies and cartularies of all the claustral and charter house schools of Touraine, Poitou, Anjou, Maine and Normandy, we find abundant records of medical teaching and practice by the learned ecclesiastics associated with these foundations, as well as by laic or professional physicians. Strong men these, if we may judge of them by authenticated records and in the light of the stressful times in which they lived. In Western France, the record of monastic medicine would appear to have been better than most.

In this area and period, physician, pharmacist and surgeon were one and the same, although tonsuring, shaving and blood-letting were already delegated to that subalternized industrial who was to give so much trouble later, namely the barber, *barbitonsor* or *phlebotomus*; while medicinal simples were obtained at the shops of the herb-gatherers, who were variously called *herbarii, pigmentarii* or even *épiciers.* Venesection, too, was practiced by the monks themselves, the main indications being a plethoric habit of body and the temptations of the flesh. A doctor was known either as *physicus or medicus,* since *physica,* equated by Alcuin with natural science, was elsewhere or otherwise synonymous with medicine, while *chirurgus, apothecarius* and the vernacular expression *mire* also signified physician. In the *romans, chansons* and *fabliaux,* we find the *mire* to be, in some places, a sort of general assistant in all manner of diseases and injuries, in others occupied exclusively with external wounds, in others, a professional physician, educated at Salerno or Montpellier, whose functions were sometimes assumed by low-caste impostors (*le vilain mire*). Through the whole period of feudalism and chivalry, battle wounds were the main item of medical interest in the epics and romances of adventure and wounded knights were treated variously by comrades, squires, ladies of high degree or any other persons available.

The *chansons de geste* tell much of battle wounds, little of disease. The romances of adventure and those of the Arthurian cycle are replete with instances of sickness at court or in the open, for instance, the many ailments of Tristan or the account of leprosy in *Amis et Amiles.* But it is in the dramatic pieces, the *fabliaux,* the mysteries, miracle plays and moralities, that scholars have found the best sidelights on mediæval medicine.

Thus in *La condamnacion de banequet,* a morality by Nicole de la Chesnaye, catarrh, gout, debility, asthma, lame joints, fever, dropsy, paralysis,

pleurisy, colic, jaundice, apoplexy, epilepsy, diphtheria and stone in the bladder appear on the stage as protagonists of the evil effects of over-indulgence in eating, drinking and venery, while physicians of credit and renown descant upon these disadvantages of riotous living. In a mystery called *Les miracles de Sainte Genevieve,* the wrath of God and the necessity of conversion and repentance are illustrated by the appearance of a dropsical patient, who is afflicted from head to foot with scabies, hernia, stone, unilateral paralysis, gout, haemorrhoids and halitosis. A varlet in this mystery has gout, a phthisical cough, infestation with parasites, jaundice, measles and smallpox. Both call upon God for relief:—

"Dieu, vostre aide par charité,"
"Sire, j'ay tel deuil que je criève,
De ce que je suis sy gouteus,
Que des deux hanches suis boiteus,
Et ay la tous, maise poitrine,
Clous, pous, cirons, lentes, vermine,
J'ay chascun jour la feinterole,
J'ay le jaunice et suis éthique,
Ne guérir n'en puis par phisique."

In all these dramatic pieces, diseases are listed in profusion, but no particular attempt is made to outline their semeiology. Many, such as St. Anthony's fire or ergotism, *le mal de Saint Jehane* or epilepsy, the mysterious *mal de Saint Fiacre,* presumably haemorrhoids, are associated with their patron saints, who had the power of healing them. In the Middle Ages, when the average expectation of life was less than half the age now accepted by actuaries, the possibility of being disabled or extinguished by disease was omnipresent in the minds of the people. Health during a life certain to be short, *n'estre malade ni mourir,* was an almost universal aspiration:

"Qui n'a rien, il ne perd rien,
Qui n'a santé, il n'a rien,
Qui a santé, il a tout."

Pain, sorrow, warfare, disease and poverty are featured in harsh outlines as the common lot[4], so much so, in fact, that at the beginning of the 16th century, the depiction of

[4]For example, the mediæval motto of *La mare au diable* of George Sand:

"A la sueur de ton visage
Tu gagnerois ta pauvre vie:
Après long travail et usiage,
Voici la mort qui te convie."

ghastly diseases has become a favorite theme of oil painting and the grim skeleton of the Holbein *Danse macabre* is lord of all. Even the profanity of the period took the form of wishing diseases or an evil death upon one's enemies or haply upon oneself for some trait of stupidity. "A pox upon you" or the "Saint Anthon fire thee" of Scott's Marmion may be matched by such expressions as *"Le mal passion le tord"* or *"Male mort le preigne et ocie."* Disease was bitter, treacherous and repulsive. Only the *mal d'amour* was sweet. Female complaints, in particular, were made light of (*Mal de femme, ce n'est rien*) and the feigning of disease by knights and ladies, to further their love affairs, was a common deception, even as beggars sought sympathy by means of artificial wounds or posed as professional cripples. The pathology of the older epics and *fabliaux* was thus a very general pathology, in which diseases were usually of undecipherable or incurable nature and of unknown or supernatural causation, curable only by miracles. The agony of intestinal obstruction or appendicitis was likened to the Passion of Christ, as *passio iliaca,* and a martyrology of the saints or a text-book on the practice of medicine was called alike a *Passionarius.*[5]

The effects of violent emotion upon the heart, the blood-vessels, the lungs, larynx, skin, nervous system and the organs of sense were depicted with a fidelity of detail which would do credit to the books of Darwin or Duchenne upon this subject. A chill was usually associated with fever and the account of the Third Crusade by Ambroise attributes cough, tonsillitis, swelling of the limbs and loosening of the teeth, to the continual rain and damp weather incident to this campaign. Scurvy was, in fact, described by Joinville and Jacques de Vitry as early as 1250. Heat-stroke, heart disease, hernia, discharges from the ears, sea-sickness, vertigo, tertian and quartan fevers, quinsy, scabies and diseases affecting the different organs of the body were all known to the old French poets and dramatists. The symptoms of leprosy, in particular, are given in great detail. As to the social status of the leper, he appears to have been treated with great sympathy and consideration. Tristan even simulates leprosy in order to have speech with Yseult. A hideous superstition to the effect that leprosy

5Du Cange: Glossarium mediae et infimae latinitatis, Niort, 1886, VI, 198.

was curable only by bathing the body of the leper in the fresh blood of a murdered child is prominent in *Amis et Amiles* and in the miracle play of the Empress of Rome. Diagnosis of disease included palpation, pulse-taking, examination of the blood and uroscopy, by which the patient's condition was often determined at a distance. Treatment was limited to cupping, venesection, purging, clysters, medicinal simples and the knife. Fevers were treated by fasting or copious draughts of wine or sweating. Massage was practiced in surgical conditions. Women were handled with care and consideration during confinement, but while the duration of pregnancy was known, a variable interval of time between the date of conception and the inception of pregnancy was assumed or presumed, to give the benefit of doubt in suspicious cases. Twins were confused with superfœtation, to the detriment of the mother's fair fame. Beatrix, in the Knight of the Swan, gives birth to septuplets, allocated to seven different fathers. There is abundant satire about quackery, bogus physicians, imaginary invalids and malingering.

In brief, a fairly complete picture of the status of medicine in mediæval France can be pieced out from the older epics, romances, *lais* and *fabliaux*. Even the comic-opera figure of the quack in the old farces (*Je suis un bon mire de Salerne*) seems a foretaste of Molière.

The spirit of delicate consideration for the wounded, as conveyed in the old romances, reveals the most pleasing aspect of chivalry:

The first indication was to get the wounded warrior in a bed, if available, otherwise he was laid upon the ground, given a stimulating wound-drink to relieve faintness, after which his wounds were examined, washed and bandaged, before transportation on shields, litters or horseback to some place of safety. Wine was sometimes poured into the wounds and may have had some crude antiseptic effect. After the introduction of fire-arms, boiling oil was poured into the wound up to the time of Ambroïse Paré, on the supposition that such wounds were poisoned. When there was little bleeding in punctured wounds from spears and arrows, the patient usually died of internal hemorrhage. Cupping and leeching were the only palliatives, apart from the services of a new industrial, the professional wound-sucker, who continued to ply his trade unto the end of the 18th century. The ministrations of women, as precursors of organized nursing personnel, are depicted with great charm. In dismounting from his horse, Aucassin misses his stirrup and sustains a dislocation at the shoulder. Whereupon Nicolete, by experimental manipulations at the injured joint, succeeds in reducing the luxation before making him comfortable. In the chronicles of Froissart, the historian of the Hundred Years War (1336-1453), there are

very commendable gropings toward military administration in the evacuation of the wounded, as evidenced by his constant harping on the necessity of getting them to shelter (*au logis*) and of making them comfortable by suitable dressing (*mettre à point les navrés et les blessés*). Froissart anticipates Rabelais in his jocund, expansive recital of the food supplies. He contrasts the poverty, penury and abstemious habit of the Scotch soldiers with the English concern for creature comforts, their cooking stoves, handmills for grinding grain and lavish commissariat; or the travelling kitchens, bakeries and portable barracks of the French, the salves, bandages and lint in the supply-trains, the old Roman ration of vinegar in lieu of wine. He gives full length descriptions of the camp at Chisay (Poítou) in 1372, the successive epidemics of jaundice (1378), of presumable typhus (1385), of presumable influenza of gastro-intestinal impact, which necessitated the raising of the siege of Lisbon (1384), the impact of heat-stroke in 1391, and the never ending epidemics of dysentery and malarial fever with which the French army was scourged. We are now at the end of the 14th Century.

The Latin medical literature of mediæval France, as listed in the *Histoire littéraire de la France* or in Haeser, need not detain us long.

It comprises the versified herbal *Macer Floridus,* commonly ascribed to Odo of Meudon (+1161), the poems of Gilles de Corbeuil (+1220), body-physician to Philip-Augustus, on materia medica, pulse, urine and semeiology, the *Régime du Corps* of Aldebrandino (13th Century), and in Provençal, a poetic version of the surgical practice of Roger of Parma by Raimon of Avignon (1200), an anonymous tract on dietetics in verse, a tract on the external application of brandy, and prose translations from Galen, Albucasis, Benvenuto Grassi and Roger of Parma. This remarkable proliferation of vernacular medical literature in the South of France is explicable perhaps by the reasons usually assigned for the rise of Provençal poetry and its extinction after the Albigensian massacres (1207-1215), when the troubadours were driven by unemployment into Northern Spain and Italy. The principal text on practice of medicine, the *Lilium medicinae* of Bernard de Gordon, was enormously influential in the 13th-14th centuries, but is of little positive value. Gordon taught medicine at Montpellier from 1285 to 1307, and here, by consequence of the Moslem invasions and the proximity of Moorish Spain, Arabic influences were predominant. Arabic medicine was Greek medicine diluted by filtration through the Arabic medium, but unfortunately for Arabized Greek medicine, it was saturated with Galenic dogma and imposed this dogma upon the medicine of Western Europe for centuries.

Thus the very initial directives in training the student for the practice of his profession were wrong and wrong-headed at the start, even down to the time of Sydenham. Dominated by what Osler calls "the heavy hand of the Arabian," the internal medicine of the later Middle Ages

is negligible. There is no exaggeration in the dictum of Allbutt that it had sunk into "an almost unexampled degradation" and no danger that we shall ever underestimate its value. The profusion of Latin and Provençal translations of surgical texts is an index of something more exhilarating. "War," said Hippocrates, "is the best school for the surgeon," whence surgery became a going concern for the sufficient reason that necessity was ever the mother of invention. The great surgeons of the Middle Ages were men of striking originality, forced to think for themselves and to devise their own procedures under stress of emergency. Associated with France, in this group, are Lanfranc, Mondeville and Guy de Chauliac.

Lanfranc, the founder of French surgery, came to Lyons from Milan as a pupil of Saliceto. Proceeding to Paris, he found himself excluded from the celibate roster of the university as a married man and so joined up with the College of Saint Côme, founded about 1260-71 by Jean Pitard, surgeon to Philip the Fair. The *Chirurgia magna* of Lanfranc completed in 1293 and dedicated to Philip the Fair, opposed the Arabian separation of medicine and surgery and insisted that the surgeon should know internal diseases. As with all the major surgical texts of the period, this *opus magnum* was translated into French, German, English and even Spanish. The most original of the trio was Henri de Mondeville, who lectured on anatomy at Montpellier in 1304 and during 1306-16, wrote a great unfinished surgical treatise, which has been edited, translated and analyzed in detail by many recent scholars on account of its unquestioned originality. It is prefaced by a remarkable chapter on anatomy, with thirteen miniature illustrations, which afford a sort of moving picture of mediæval procedure in dissecting. Mondeville stands out as the solitary protagonist of rational wound treatment before the time of Lister. He was a bold, hardy, aggressive spirit, who insisted on doing his own thinking, whose Norman truculence crops out everywhere in his cynical comments on the etiquette and practice of surgery in his day.

A man of gentler and more scholarly type was Guy de Chauliac, an Auvergnat, who was the best educated and most learned surgeon of his time, incidentally physician to four successive popes in residence at Avignon. When the Black Death descended upon Avignon in 1348 and 1360, Guy stood manfully by his patients, where others fled. His text-book, completed in 1363, was the accepted guide (*guidon*) to surgical practice, even in Elizabethan England. Its initial chapter is the only history of medicine of consequence between Celsus and Champier.

Glancing for a moment at Montpellier, where some leading representatives of English medicine in the Anglo-

Norman period were trained, we come to the medical humanists of the Renaissance, in particular, Rabelais and Symphorien Champier.

Rabelais was the first to lecture on medicine at Montpellier with the actual Greek text before him. While in residence there, in 1531, he was one of the actors in a medical farce or morality *La comédie de celui qui avait une épouse muette,* derived from *Maître Pathelin* and reproduced both by Molière (*Le médecin malgré lui*) and Anatole France. The next year, Rabelais made his début in literature with his Latin version of the aphorisms of Hippocrates and the *Ars parva* of Galen, as well as the immortal *Pantagruel* (1532). More effectively than any other literary classic does this book express the extravagant joy of life, the expansive self assertion, and swagger, the footless erudition of the awakened Renaissance. Less appreciated than the *gauloiserie* is the point, established by Sainte Beuve, that *Pantagruel* is also the first brief for education as a drawing out of all the natural faculties, in opposition to the mediæval plan of stuffing the brain, like a Strassburg goose, with erudition of the kind ridiculed by the great humanist.

Symphorien Champier, of Lyons, physician to two of the Valois monarchs and a medical graduate of Pavia, was a humanist of the sober-sided erudite persuasion, a conciliator, in the terminology of the time. His Platonic Symphony (1516), attempts to conciliate the doctrine of Hippocrates, Galen, Celsus and Avicenna into a symphonic relation, visualized in the initial woodcut representing these worthies as players in a string quartet. Champier is better known as the author of the first history of medicine after Celsus (1506), the first medical dictionary after Simone Cordo (1508) and as the biographer of Arnold of Villanova (1520) and Mesue (1523). He himself is the subject of an elaborate biography by Allut of Lyons (1859).

The first printed book to be published in France, the *Epistolae* of Barzizius, appeared at Paris in 1470, after which date incunabula were printed in large numbers down to the end of the 15th Century, and in thirty-six towns all over France, apart from the capital. The Parisian and Lyonnaise printers of incunabula make a long list and their output of medical books gave a special incentive to the scholastic labors of the French medical humanists who came after.

The leading internist of 16th century France was Jacques Fernel, a native of Clermont (Auvergne). One of the greatest surgeons of all time was Ambroise Paré.

Fernelius began as a mathematician and indeed made the first exact measurement of a meridian of longitude. But having squandered his means on astronomy, he got down to medical practice and acquired a large fortune. The status of physician to the king was forced upon him by Henri II and he sometimes feigned illness to evade its responsibilities. Nevertheless he cured Catherine de Medici of her sterility, relieved the various complaints

of Diane de Poitiers and was most generous and kindly to the poor. His text book on medicine (1554) reveals the orderly, precise, analytic quality of the mathematical mind, contains the best classification of diseases between Galen and Felix Platter, and is remarkable for the section called *Pathologia,* the first text in which clinical findings are correlated with causation and checked by postmortems. Fernelius differentiated gonorrhœa from syphilis, made many autopsies on tuberculosis and correlated the respiratory, gastro-intestinal, paralytic, lethargic and sensory manifestations of epidemic influenza in an entirely modern spirit. His work is little known except to professional pathologists.

The first great name of European eminence in French medicine is that of Ambroïse Paré. Coming up to Paris from the province of Maine, in 1529, Paré became a dresser at the Hôtel Dieu and entered the army in 1537. His life of eighty years covered the reigns of seven Valois monarchs and three Holy Roman Emperors, everything, in fact, from Flodden Field to the Armada, from Luther at Worms to the battle of Ivry. His whole career was military, and so well beloved was he among his comrades that he was even consulted by monarchs and commanding officers in regard to military operations. Before the advent of Paré, the army surgeon was merely a vassal of monarchs or great feudal over-lords and paid no attention to the common soldier. At Turin, in 1536, Paré saw an old sergeant cut the throats of three helpless wounded men, "gently and without malice," to put them out of their misery. The episode appears to have affected him profoundly and for the first time in military history, we see an army surgeon going out of his way to treat the wounded soldier, as he did at Perpignan (1543) or Boulogne (1545) or on the march through Germany (1552). Not only did he attend these patients, he worried about them, a good sign, as showing that he was beginning to think medically as well as surgically. How he worried about the boiling oil and red-hot irons applied to battle wounds until he learned to let well-enough alone, is an index of his large humanity and insight, the high point in his career. His restatement of the Hippocratic doctrine of the healing power of Nature *"Je le pansay, Dieu le guarit"* means simply that, for a long time, Nature got the patient well, if ever, while the doctor amused him, or himself, with futile remedies. Paré wrote many books, and as he wrote in the vernacular, employed a pedant or *pion* to stuff his collective works with superfluous erudition, after the fashion of his time. This book is nevertheless, the first important folio volume on medicine to be understanded of the people. A bigot of the Paris Faculty tried to stop its publication, whereupon Paré proceeded to flap him with bladders, counselling *mon petit maistre* to treat more kindly *le bon vieillard.* In other words the great achievement of Paré is as nothing beside his reputation in camp and at court, as the honest impersonal soldier and man of honor. In an age in which thousands were slaughtered and heretics were tortured in flaming fire for mere quibbles about theological verbiage, he remained firm, impersonal, upstanding and essentially sweet-tempered to the end.

The Provençal surgeon, Pierre Franco was a Huguenot, driven by the Waldensian massacres into Switzerland. He was a bolder and better operator than Paré and did most to take the operations for cataract, stone and hernia out of the hands of the strolling incisors and put them upon a reliable working basis (1556-61). In 1895, Nicaise published a definitive edition of Franco, whose surgical writings had already been reprinted as late as 1881 and 1884. In this surgical group may be included the first French treatise on diseases of the eye, that of Jacques Guillemeau (1585), of which the English work, of Richard Bannister (1622), was mainly a translation, and *L'hysterotomotokie* (1580) of Francois Rousset, which records 15 successful cases of Caesarean section. Apart from the initial chapter of Paré's Surgery, the outstanding French anatomy in this period was the illustrated quarto got up by Charles Estienne, called Stephanus (1545), a medical publisher who was imprisoned for heresy and died in prison. His book contains the first account of syringomyelia. Whooping cough and rheumatism were put on the map by Guillaume de Baillou, one of the founders of epidemiology. Many new terms were added to the French language from the biological writings of the day, in particular, the books on the comparative anatomy of birds and fishes by the physicians Pierre Belon and Guillaume Rondelet. The botanical treatise of Jean de la Ruelle (1536) gives the French popular names of each plant, which Ruellius acquired by questioning the peasants and mountaineers on his excursions. The first medical dictionaries after Symphorien Champier (1508), were those of Henri Estienne and Jean de Gorris, both published in the year 1564. They were important as fixing definitions for many anatomical terms and have thus had a decisive influence on modern anatomy.

Medicine was naturally reflected in the secular literature of the Renaissance, notably in Ronsard's poetic description of insomnia and Montaigne's account of medical matters, including his own ailments, in his Journey into Italy.

Montaigne's Essays deal with such matters as divination, cannibalism, sleep, that our emotions run away with us, smells, drunkenness, against malingering, of a monstrous child, the resemblance of children to their parents, cripples and physiognomy. On the whole, the most readable medical document of the period is the *Apologia et voyages* of Paré.

In the 17th century, in consequence of Harvey's demonstration of the circulation of the blood, anatomists made many discoveries of physiological significance and laboratory experimentation became a word of ambition. Laboratory medicine went up. Internal medicine and surgery went down. Diagnosis was based upon futile figments of the mind and the tyranny of words, the bizarre terminology ridiculed by Molière. Therapeutics sank to a level of in-

efficiency not much better than that of primitive savages. The London Pharmacopœia was loaded with lengthy rumble bumble and the exploitation of filth as remedies. The worthwhile surgeons of the 17th century can be counted on the five fingers of one hand. The only French internist of consequence was Charles Barbeirac of Montpellier, who is said to have imparted his clinical method to Sydenham. The Parisian internists were the sterile pedants ridiculed by Guy Patin and Molière.

Apart from experimental science, with which even the great philosophers of the period, Bacon, Descartes, Spinoza, Locke, were concerned, the 17th century was remarkable for the origination and growth of scientific societies all over Europe, with their transactions as a means of spreading knowledge more rapidly. It was also the age of newspapers and of medical periodicals.

The first French newspaper, the *Gazette de France*, which appeared in Paris on May 30, 1631, was edited by a physician, Théophraste Renaudot who was also the originator of pawn-shops and intelligence offices. The first scientific periodical was the *Journal des Scavans*, begun in Paris on January 5, 1665, in which year the Academie des sciences was founded. The first medical periodical to be printed in the vernacular was the *Nouvelles découvertes sur toutes les parties de la médecine*, edited by the surgeon, Nicolas de Blegny at Paris in 1679-81, subsequently translated into German, even into Latin, and continued in Latin as the *Zodiacus medico-gallicus* by Théophile Bonet at Geneva in 1680-85. It was succeeded by the *Journal de médecine* (1681-85), edited by the Abbé de la Roque and continued by Claude Brunet, who also edited a monthly *Progrès de la médecine* (1695-1709). The French original of the *Nouvelles découvertes* was suppressed in 1682 on account of its flippant handling of contemporary physicians, which impelled de Blegny to issue a volume of satirical sketches, the *Mercure savant* (Amsterdam, 1684). It is said that this manœuvre, combined with the list of addresses of Parisian physicians at Renaudot's intelligence office, engendered the first city directory, the *Almanac des addresses de Paris.*

The century of Richelieu, Mazarin and Louis XIV was one in which public spirit was utterly crushed out by the tyranny of absolutism and the heavy taxation incident to long, expensive and meaningless wars. When the *Grand Monarque* abolished the ancient office of Mayor of the palace, the joyous, expansive life of the Renaissance had given place to a ponderous stilted formality of costume,

behavior and etiquette, taken over from Spain, and this was not without its effect upon the medical profession. For half a century before the advent of Molière, physicians and surgeons alike were ridiculed as sterile, pedantic coxcombs, who affected the austere scarlet of the clergy or the red heels of the aristocracy and made a vain parade of their Latin, to discourse learnedly about diseases of which they knew little or nothing. The three-cornered squabbles of physicians, surgeons and barbers, the decline of the universities, the rise of scientific academies and periodicals, all these things had to do with the eventual rise of French surgery in the 18th century. The leading names of French medicine in the 17th century were the anatomists Dionis, Vieussens and Duverney, the medical botanist Tournefort, the obstetricians Mauriceau, Portal and Louise Bourgeois, first of the literary midwives, who attended Marie de Medici through her six confinements, and the surgeon Dionis.

Duverney wrote the first text book of otology. Mauriceau developed the accepted canon of obstetrics. Du Laurens maintained the communicability of scrofula (1609). The veterinarian Solleysel demonstrated the transmission of glanders from horse to horse (1664). Lead poisoning was described by Citois as Poitou colic (1616). Vieussens, Portal and Barbeirac were associated with Montpellier. Daniel Leclerc, author of the first large book on history of medicine (1696), was a native of Geneva. Literary interest attaches to the history of King's Evil by André du Laurens (1609), the whimsical gynæcology of Augustin Corrade (1634) called *L'hydre féminine* and the *Callipaedia* of the Abbé Claude Quillet (1656), a poem on the art of begetting beautiful children, which seems, at this time of day, a burlesque approach to eugenics. The satirical onslaughts upon the medical profession by Molière, Le Sage and Guy Patin are too well known to need particular comment. Molière as we have seen, had a long foreground[6]. The intermezzo-ballet in the *Malade imaginaire* of Molière, a burlesque of the ritual of graduation from the Paris Medical Faculty, is the choicest bit of medico-historical satire ever penned by a man of genius.

Lexicography was forward in this century. The great epidemiologist Baillou made a glossary of Hippocratic terms (1639), Gabriel Naudé of the Apologie made another essay in this kind (1647) and etymological lexicons were published by Thevenin (1669), and Callard de la Ducquerie (1673).

---

[6]The graduating dissertation of George T. Moody (Johns Hopkins University, 1932) demonstrates that Molière was the culmination of a steady run of literary satire on physicians during the first half of the 17th Century.

Overtopping all these stand the great names of Descartes and Pascal. The analytical geometry of Descartes (1837) gave to medical and biological investigation a new weapon of precision, the plotting of curves by the coordination of points in space. Pascal rendered equal service through the creation of descriptive geometry and the mathematical theory of probabilities. The starting point of modern experimental or physiological psychology is the treatise *Des passions de l'âme* of Descartes (1649), which antedated the Ethics of Spinoza. Descartes wrote the first formal treatise on physiology (*De homine,* 1662), the intention of which is quite modern in that, as Stensen observed, it does not pretend to expound the actual human body but "a machine capable of performing all its functions." It contains the first correct account of reflex action. Descartes also showed that accomodation in vision is due to changes in the form of the lens (1637). Mariotte discovered the blind spot in the retina (1668). Finally, the *Discours de le methode* of Descartes (1637) expounds, with utmost brevity and simplicity, the four successive steps in the conduct of a scientific investigation, to which no physician of the 17th century paid the slightest attention in attempting to diagnose internal disease:

1. Admit only what is clearly self-evident; in other words, clear your mind of all preconceived notions, obscure theories and footless hypotheses.
2. Analyze all available data with punctilious exactitude.
3. Proceed from the known to the unknown by coordinating said data into a synthetic whole.
4. Revise your findings by a clean sweep of the whole matter and of any unconsidered details. Here we have French intelligence at its best.

Hypnotism, autosuggestion and psychotherapy were well-known in the 16th century[7] and the effects of the mind upon the body became prominent in the subsequent quest of physiologists for the seat of the soul. Descartes located it in the pineal gland, Van Helmont in the pit of the stomach, and Stahl regarded psychic disturbances as the efficient cause of disease. The association of Pascal with

[7]See, Camille Rouzeaud, Paris dissertation No. 4, 1918, who calls this period *le siècle de l'hypnotisme.*

Port Royal, following the collision over the gulf which was the turning point in his career, suggests the many clergymen of the period who practiced psychotherapy by functioning as directors of the female conscience. The *Historiettes* of Tallement des Réaux (1657) the letters of Mme. de Sevigné (1673-97), and the Mémoires of Saint Simon (1734-46) abound in clinical data, some of this species, and all suggestive of the sterility of internal medicine throughout the century.

In the 18th century, the centre of surgical teaching and practice was Paris, to which even Frederick the Great sent junior medical officers for training. The successive steps in this development were three, viz:

The surgeon Felix, having repaired the fistula in ano of Lewis XIV, was ennobled by the king, who created for his successor Mareschal five surgical chairs in the Collège de Saint Côme (1724). Enraged, the Paris Medical Faculty bombarded the doors of Saint Côme in bitter cold weather, but were driven away by the angered populace, who had lost all respect for their furs and costly red robes. Next came the foundation of the Académie de Chirurgie by Mareschal and La Peyronie of Montpellier and its first meeting on December 18, 1731. Finally, at the instance of La Peyronie, Louis XV, in a decree of 1743, freed the surgeons from the barbers by forbidding the latter to practice, since no one could be master of surgery henceforth without the degree of master of arts.

This was the French surgeon's Declaration of Independence, guaranteed by a firm footing of preliminary training and scientific instruction and comparable only with what John Hunter did for the *locus standi* of the English surgeon as Surgeon General of the British Army. The French surgeon, from Dionis to Desault, was now to be a well educated, self-respecting man, fitted to write upon his subject with precision and concision. Laplace even proposed that medical men be admitted to the Academy of Sciences, "so that they could associate with scientific men" (*afin qu'ils se trouvent avec des savants*). The surgical literature of the period is extensive and its importance may be estimated by referring to a few high spots.

The surgical treatise of Dionis (1707), was translated even into Chinese. In 1710, Dominique Anel of Toulouse repeated the operation for aneurysm by a single ligature long before John Hunter took it up. In 1712, Anel

introduced his operation for lachrymal fistula, which preluded the remarkable work of the Norman, Daviel, who became eye surgeon to Louis XV in 1749. In 1752, Daviel started modern ophthalmic surgery by one hundred successful operations for cataract by extraction of the crystalline lens, to which he even added iridectomy. By 1756, he reported four hundred and thirty-four extractions, with only fifty failures, which standardized the procedure in surgical practice. In 1736, Jean Louis Petit opened the mastoid process for the first time. Orthopedic surgery was founded by Nicolas Andry (1741) and Venel of Geneva (1780). Desault founded the *Journal de chirurgie* (1791-2), improved the treatment of fractures and aneurysms and imparted to his pupil Larrey the principle of treating gunshot wounds by *débridement* (excision) with primary suture (1790), which became so prominent on the Western Front over a hundred years later. David, a Norman of Rouen, described spinal deformity from caries, contemporaneously with Pott (1779). Mestivier operated successfully for an appendicitis caused by a pin in 1759. Moreau introduced excision of the elbow during 1786-94 and Chopart his amputation of the foot in 1792. Apart from these war surgeons of the Revolution, there was a remarkable group of neurologic surgeons, of whom Saucerotte and Méhée de la Touche first described acromegaly in detail (1772-73), Pourfoir du Petit (1710) and Saucerotte (1769) established the doctrine of contralateral innervation and Pourfour du Petit developed what little was known of the sympathetic-autonomic system (1723). Work on contrecoup and head injuries was activated by the Académie de Chirurgie itself (1760).

The 18th century was remarkable for a swarm of descriptions of new diseases, in which regard it was only to be surpassed by the clinical output of the 19th.

The first formal treatises on heart disease, those of Vieussens (1715) and Senac (1749) established the basic data about pericarditis and many of the valvular lesions, and preluded the subsequent achievement of Corvisart, Laennec and Bouillaud. Thierry described pellagra in 1755, Nicolas André infraorbital neuralgia in the same year, Lorry melancholia in 1765, Fodéré goitre in 1792. Here was already considerable improvement upon the sterile ineptitudes of the 17th century, a tendency to deal with facts as facts, which was to come into its own when Paris became the Mecca for instruction in clinical medicine during the Napoleonic period and long after. Anatomical research was of the most varied kind. The text book of the Dane, Winslow (Paris, 1731), established many details concerning the origin and insertion of the muscles and their nomenclature, and these became permanent in the literature. The sportsmanlike tendency of the surgeon-anatomists of the period, with reference to elaborate illustrations at their own expense, is evidenced in the atlases of Lieutaud (1742). Didactic illustration in oil painting was done for the first time and on a grand scale by Gautier d'Agoty (1759). The Paduan tradition of comparative anatomy was revived by Vicq d'Azyr (1773).

The crowning achievement of France in physiology was the work of Lavoisier and his associates on breathing (1775-91). The work of Réaumur on regeneration in animals, on digestion in birds and on thermometry was also of basic importance. In 1775, Théophile de Bordeu, in his *Analyse médicinale du sang,* adumbrated the correlation of the internal secretions of the ductless glands for the first time.

The first classic on dentistry, *Le chirurgien dentiste* of Pierre Fauchard, was published in 1728. The second edition (1746) contains his original account of pyorrhœa alveolaris and the use of orthodontal procedure in malocclusion.

The first great psychiatrist of France, the apostle, in fact, of sane and humane treatment of the insane, was Philippe Pinel, who, with the consent of the National Assembly, made an epoch on May 24, 1798, by striking off the chains from 49 insane patients at Bicêtre, an event commemorated in the well-known painting of Tony Robert Fleury. In the 18th century, insanity was not regarded as a mental disorder, like a disease of the brain, but as a mysterious incurable affliction, usually the result of sin, hence a disgrace rather than a misfortune to the individual and his family. Excitable patients were chained and an asylum was a cross between a prison and a poor-house. Pinel's work, including his clear separation of mania, melancholia and dementia, is the starting point of the scientific treatment of the insane as sick patients in hospital.

Thus in the 18th century, there was everywhere a remarkable versatility in medical achievement. More and better work was done than formerly, due, perhaps, to the fact that the period before the Revolution was relatively quiescent. After thirty years of warfare between two bankruptcies, the foreign policy of France under Louis XV and his minister Fleury was to cultivate masterly inactivity, lie doggo and let the other fellow do the fighting, until Pompadour involved France in the Seven Years' War with Frederick the Great. As with Spain in the same period, the consequence of this *faire la guerre* policy was the loss of all the colonies and the dominance of the Anglo-Saxon in North America. Contributions to medicine were made even by laymen in this period.

Conflict with received opinion rather than humanitarian interest in the blind caused Diderot to be thrown into prison at Vincennes after the publication of his *Lettres sur les aveugles* (1749) which was suppressed. In those days, the blind, the deaf, the halt and the lame were regarded as objects of derision. Disgust at a burlesque public concert by the blind led the mineralogist Hauy to found a national Institute for them in 1786 and

to print books for them with raised characters. His *Essai* of 1786 was the point of departure of all modern endeavors. In like manner, the Abbé de l'Epée founded a school for deaf mutes in Paris (1755) and left an unfinished dictionary of deaf and dumb signs, completed after his death by his successor, the Abbé Sicard. Diderot wrote for the *Encyclopédie* (1752-72), over which he labored for over two decades, 18 articles on medicine, 10 on botany and 10 on natural history. Voltaire contributed to his *Dictionnaire philosophique* (1764) some 30 articles of medical or medico-historical interest. The *Émile* of Rousseau (1762) albeit condemned by the French and the Swiss governments, was not without its effect upon the basic idea of infant welfare. From Fontenelle's *Dialogues des morts* (1683) to the time of that arch *mauvais sujet* of medicine, La Mettrie, there was a continual run of satire on physicians and their ways. La Mettrie, a most industrious polyhistorian, made a translation of the works of Boerhaave, now forgotten. His satirical *Politique du médecin* (1746) was condemned and publicly burned by order of the Parliament of Paris. He followed it up with two medical comedies, *La Faculté vengée* (1747), *Les charlatans demasqués* (1762), and a satire on the leading physicians of Europe, *Ouvrage de Penelope ou le Machiavel en médecine* (1748), to which he had the impudence to add a supplement, with key (Berlin, 1750). He attained the extreme limit of crass materialism in *L'homme machine* (1748) dedicated ironically to Haller, *L'art de jouir* (1751) and *Vénus métaphysique* (1752), which, like Diderot's *Le rêve de d'Alembert* (1769), reflect the dissolute spirit of the Regency and the dissolving social forces implicit in the Revolution.

Apart from the light-footed irony of Fontenelle and Molière, clowning about medicine, is as a rule, deadly in its dullness, for the sufficient reason that, whatever the antics of doctors, medicine, as dealing with disease, injury and death, is not, in itself, a funny subject[8].

The Revolution and the Napoleonic Wars meant not only the break up of the social order, but also a release of energies at the time unpredictable. A chronologic arrangement of French literature, from the *Atala* of Chateaubriand (1801) to the end of the century, each year dating a classic, illustrates this *carrière ouvert aux talens,* just as the literature of the 20th century, illustrates, year by year, the gradual decadence and decomposition of the old order of

[8]The *ne plus ultra* of clowning is perhaps attained in the colored illustrations of the recent reprint of Littré's Hippocrates, with introduction by Prof. Henri Roger (1932). The attendant *mīdinettes,* who officiate as nursing personnel to the grim sage of Cos, have just stepped out of *La vie parisienne.*

things before the World War. A chronology of French medical achievement, corresponding with these entries from 1801 to 1932, is so extensive and complex that to attempt to give any account of it would be bewildering. One can only indicate the broad general outlines and trends of development. While Chateaubriand is publishing *Atala* (1801) and the *Génie du Christianisme* (1803), Pinel issues his classic on insanity, Bichat starts an epoch with his books on the descriptive anatomy of the tissues and membranes, Dupuytren founds the Société anatomique de Paris, the Bulletin of which has to this day remained the repository of French pathology. From this time on until the middle of the 19th century, Paris remains the world center of medical teaching. The clinical medicine of the future is made in the Paris Faculty, holding its own, along with the surgical tradition of the 18th century, until the Franco-Prussian War and well beyond it. The changes apparent through the different decades are these. During the romantic literary period, which dates back to the *Paul et Virginie* of Saint Pierre (1798), the period of Mme. de Stael, Benjamin Constant, Lamartine and Alfred de Vigny, the leaders of French medicine are Corvisart, Bretonneau of Tours, the two Breton clinicians, Laennec and Broussais, who with Louis, Andral, Chomel, Piorry, Bouillaud are to be the teachers of many outstanding physicians of England and our own Eastern cities. Along with these Bichat, the physiologists Flourens and Magendie, Napoleon's army surgeon Larrey, Dupuytren, Boyer, Lisfranc and Nélaton. The July Revolution of 1830 ends the Romantic movement. Spengler signalizes the appearance of *Le Rouge et le Noir* of Stendhal, in 1830, as a turning point in European literature, although Stendhal shrewdly observed: "I shall be appreciated toward the year 1900." Be that as it may, the mild, sentimental species of romantics give place to more picturesque and self assertive types, such as Dumàs père, Victor Hugo, Gautier, Banville, Musset and Balzac; but while Broussais is still going strong, albeit to empty benches, Laennec gives place to Trousseau, the tyrannic Dupuytren

to Nélaton and Malgaigne, and there is no particular change until the middle of the century, when Trousseau becomes clinical overlord of the Hôtel Dieu and Pasteur and Claude Bernard begin the new epoch of experimental medicine. In 1839, when de Tocqueville is finishing his Democracy, Stendhal publishing *La Chartreuse de Parme* and Mérimée just beginning *Colomba,* Bouillaud is working on rheumatic affections of the heart, Cruveilhier on his great atlas of pathology, Cuvier on his Animal Kingdom, Gavarret on medical statistics and Poiseuille on another new departure, the viscosity of the blood. Through the late forties and the fifties, Claude Bernard and Brown Séquard are experimenting on the foundations of endocrinology, Duchenne is founding a peerless neurological tradition, which is to last unto the team-work of the Salpêtrière group during the World War, long after the great clinical tradition of Laennec and Louis had died out. Pasteur and Claude Bernard dominate the scene to the end of their lives. In 1857, when Flaubert publishes *Mme. Bovary* and Baudelaire, *Les Fleurs du Mal,* Bernard has demonstrated the glycogenic function of the liver and Pasteur his views on fermentation. In 1862, Victor Hugo publishes *Les Misérables* and Flaubert *Salammbo,* while Charcot takes charge of the Salpêtrière, Paul Broca demonstrates motor aphasia, Koeberlé performs ovariotomy in Strassburg, Pasteur works on spontaneous generation, Daremberg, Chéreau, Menière, Raynaud are very active in the history of medicine and Littré prepares the first volume of his Dictionary of the French language, completed in 1872. In 1871, Zola begins the Rougon-Macquart series, and now we have a new school of writers, the Goncourts, Barbey d'Aurevilly, Villiers de l'Isle Adam, Rimbaud, Paul Verlaine, Maupassant, Bourget, Henri Becque, Loti, tending toward the ultra-realistic or the fantastic. To the end, Charcot is the exotic dominating figure. The clinical output is mainly neurological. Laveran discovers the parasite of malarial fever, Fournier's clinic has become a world center for venereal diseases, Pasteur has become a virtual physician through

his preventive inoculations against anthrax and hydrophobia and the medico-historical tradition is still active in spots. Toward the end of the century, Zola publishes *La Debâcle* (1895), and we have Curel, Bergson, Barrés, Rostand, Brieux, André Gide, Jules Romains, Anatole France, who hold their own through the relative mediocrity of the 20th century. On the eve of the War, Proust publishes *Du côté de chez Schwann* (1913), signalizing a new trend. French neurology retains its splendor through the war, two able physiologists are prominent, Gley and Charles Richer, author of *L'homme stupide,* and during the war period, the surgeons Tuffier, Morestin, Leriche, Lecène and Carrel.

Stendhal said: "To be a good philosopher, one must be clear, dry, without illusion. A successful banker has part of the equipment necessary to make discoveries in philosophy, namely to see things exactly as they are." In other words, the dry, factual, impersonal manner of an official or military report, which Stendhal imported into the writing of imaginative fiction, was the norm to which scientific and medical literature had been tending for centuries, even as consecutive thought among prehistoric and primitive savages had to wait upon the development of speech and the organization of language. Where La Rochefoucauld, Vauvenargues, Chamfort or Joubert could say more in a single sentence than whole stodgy volumes of duller men, so were the older medical writers apt to be "inebriated by the exuberance of their own verbosity," to the extent of being unreadable. Even Bichat, whose inspiring effect upon his generation has been eloquently commemorated by George Eliot in Middlemarch, was too diffuse, in consequence of his furious ardor to accomplish all he could in the face of approaching death. Laennec, the impetuous, ebullient Breton, who lectured in Latin on occasion for the benefit of foreign students, was sometimes intemperate and unjust in denouncing the opponents of the stethoscope (mediate auscultation), but could write with beautiful precision. He likened his bitter Breton rival, Broussais, to Paracelsus, on account of his inarticu-

late gropings toward a true theory of disease. Laennec has been characterized by Mauriac as nearer to Pascal or Pasteur than to Descartes or Claude Bernard:

"I attach no importance to this observation, which may be erroneous. It seemed to be as I have recorded it, but a phenomenon of this kind is not evident enough to be registered as an accurate statement of fact."

"The observer should be scrupulous in his assertions. A single error in the physical sciences can drive many into a blind alley, to be corrected later by years and volumes of research only."

Laennec regarded hypotheses as

"the mere scaffolding of science, to be utilized as an algebraic x", but not as a Procrustean bed, and constantly warns his pupils to be on their guard against "the errors which constantly arise from the observer's inexperience, from the day to day inequalities of his aptitude, the illusions of his senses and the difficulties inherent in the method of observation he employs."

Claude Bernard, on the other hand, was like Littré, a follower of Auguste Comte. The same cold positivism which makes the poems of Littré seem like the traceries of hoar-frost led Bernard into the colossal error of his career, his denial of the role of microorganisms in fermentation. At the same time, Bernard's positivism engendered such terse and luminous apperceptions as these:

"Observation is a passive science, experimentation an active science."

"A discovery is an unforeseen relation not confirmed in theory, for otherwise it would have been foreseen."

"In science, the thing is to modify and change our ideas as real knowledge advances."

"True science teaches us to doubt and, in ignorance, to refrain."

Charcot has the right clinical approach when he says that:

"In the last analysis we see only what we are prepared to see, what we have been taught to see," when he inquires "how it is that one fine morning Duchenne discovered a disease that probably existed in the time of Hippocrates" and goes on to explain that new facts always leave us cold, "because our minds have to take in something which deranges the original order of our ideas, but we are all of us like that in this miserable world."

Of modern medical literature of a readable character, one might recommend in brief:

The Mémoires de médecine militaire (1812) of Larrey, the Correspondence of Bretonneau with his pupils Velpeau and Trousseau, edited by Paul Triaire, Trousseau's own *Clinique médicale de l'Hôtel Dieu,* Claude Bernard's *Introduction à la médecine expérimentale,* Charcot's *Leçons du Mardi,* the contributions on medical art in the *Nouvelle Iconographiè de la Salpêtrière,* the witty biographical sketches in *Nos grands médecins* by Horace Bianchon, otherwise Maurice de Fleury, *L'homme stupide* ("Idiot Man") by that original physiologist, Charles Richet and the acute criticisms of modern medicine by Pierre Mauriac in *Aux confins de la médecine* (1926) and *Nouvelles recontres* (1930).

Scores of cultivated French physicians have written *vers de société,* but the serious poetic output of medical men, as evidenced by *Le Parnasse médicale français* (1874) of Chéreau, is mediocre[9]. A solitary exception would be Henri Cazalis (1840-1909), who was called *l'Hindou du Parnasse contemporain,* on account of his predilection for Oriental themes and resembles Leconte de Lisle in his pessimistic tendency (*Livre du néant, Melancolia*). He translated the Song of Songs and the quatrains of al-Gazali. The number of recent novels and plays about medicine and by medical men is legion. I know of only two French medical plays of consequence: *L'épidémie* of Octave Mirbeau and Jules Romains' *Knock,* and, in both, the satire is transferred from the doctor to the patient and the public. André Couvreur, a graduate of the Paris Medical Faculty, has published a long row of medical novels, the most amusing of which is *Caresco le surhomme,* a satire on the gynecologist Pozzi and the outworn mania for cutting out women's ovaries by the thousand.

With the publication of Littré's bilingual Hippocrates (1839-61) and of Malgaigne's three volume edition of Paré (1840), there began a steady outflow of serious investigation in the history of medicine, which continued through the seventies, with a second upthrust in the nineties.

Malgaigne, who, with Pétrequin, was the contemporary authority on Hippocratic surgery, was defined by Billings, as "the greatest surgical historian and critic who ever lived." The *Catalogue des sciences médicales*

---

[9]The best poem in the collection is the spiritual copy of verses by Philippe Ricord on the immortality of the soul.

of the Bibliothèque impériale is an historical subject-index of items taken mainly, it is said, from the library of Littré himself. An author-index would be invaluable. Daremberg edited Rufus of Ephesus on the pulse (1848), a bilingual of Oribasius (1851-76), the Four Masters (1854), Celsus (1859), vernacular anthologies of Galen (1854-6) and Hippocrates (1855), wrote on Homeric medicine (1865), Hindu medicine (1867) and medicine in Greek literature (1869), culminating his labors with his two volume history of medicine (1870), which held the field for a long time. Prosper Menière wrote learnedly on medicine in the Latin poets (1858), medicine in Cicero (1862) and the consultations of Mme. de Sevigné (1864). Maurice Raynaud's book on medicine in the time of Molière (1862) passed through two editions. Achille Chéreau, tyrannical Librarian of the Paris Medical Faculty, was its historian (1878), as also of French medical journalism (1867), the plague in Paris (1873), the guillotine (1873) and the six confinements of Catherine of Medici (1875), also the biographer of Coitier (1861), Mondeville (1862), Renaudot (1878) and Servetus (1879). He buried an enormous amount of valuable research as "Ephemérides médicales" in the columns of *l'Union médicale* (1866-76).

In the later period, Paul Dorveaux, librarian of the École supérieure de pharmacie of the University of Paris, made a valuable catalogue of French dissertations on pharmacy (1891-95), translated the *Antidotarium* of Nicolaus of Salerno (1896) and the *Circa instans* of Platearius (1913), also edited the *Myrouel des appothicaires et pharmacopoles* of Symphorien Champier (1894) and the rhymed *Promptuaire* or herbal of Thibault Lespleigney (1899). The medical zoologist Raphael Blanchard made a new departure in his *Épigraphie médicale* (1909-15). Jeanselme, dermatologist and syphilographer and prominent in the investigation of tropical diseases, has concentrated on Byzantine medicine and Menétrier, professor of history of medicine in the Paris Medical Faculty since 1919, has followed up French medicine, to which the *Bulletin de la Société d'historie de la medécine* (1902-32) is mainly devoted. Wickersheimer, librarian of the University of Strassburg, resembles Chéreau in his close and accurate investigation of minutiæ of all kinds. His major productions are his graduating dissertation, an unrivalled history of French medicine in the Renaissance period (1905), his catalogue of French medical periodicals from 1679 to 1856 (1908), his edition of the *Anatomie* (1345) of Guido de Vigevano (1913), his history of the Paris Medical Faculty, as conveyed in the Commentaries of 1395-1516 (1914), and his two volume catalogues of the Libraries of the Academy of Medicine (1919) and of the University of Strassburg (1922). Augustin Cabanés, author of a superb history of military medicine (*Chirurgiens et blessés, 1918*), was inclined to frivol and thus frittered away a good deal of time and labor on the trivial anecdotage and "indiscretions of history." But he was the best informed of all medical historians in these details, and some of his researches, such as *Moeurs intimes du passé* (8 vols.), *Grands neuropathes, Les évadés de la médecine,* are readable. René Semelaigne, in *Alienistes et philanthropes* (1912) and *Les pioniers de la psychiatrie*

français (1932-3) has produced a record comparable with Kirchhoff's *Deutsche Irrenärzte. Les malades de l'esprit et leurs médecins* (1930) by M. Laignel Lavastine and Jean Vinchon is another recent essay in this kind.

French medical lexicography was extremely specialized in the 18th century. A lexicon of Latin and French terms by Elie Col de Villars (1741) was accompanied by a long series of terminologies of anatomy (Peras, 1753; Tarin, 1753; Dufieu, 1766; Vicq d'Azyr, 1786); surgery (Levacher de la Feutrie, 1767; Antoine Louis, 1772; François, 1773); drugs (Nicholas Lemery, 1714; Juliot, 1758); prognosis (Tennetar, 1770), and semeiology (Tennetar, 1777). The medical dictionary of Nysten (1810) was revised in its tenth edition (1855) by Littré and Robin and attained its 21st edition in 1905. The *Larousse medécale illustré* of Galtier-Boissière appeared in 1912 and a war supplement of military medical terms in 1917. An eleven-volume dictionary of physiology published by Charles Richet in 1894-1925 is, in reality, an encyclopaedia. The great monument in this kind was the 100 volume *Dictionnaire encyclopédique des sciences médicales* (1864-1900) of Amédée Dechambre which is still a useful repository of medical biography. The most exhaustive and accurate bibliographies of the great physicians of the past are to be found in the *Biographie médicale* of A. - J. - L. Jourdain, published in Paris (1820-25) by Panckoucke and known among doctors as "Pan-cake".

The most salient trait of French medicine, by and large, would appear to be the extraordinary versatility of the many physicians who have taken up scientific, literary and artistic pursuits as hobbies, and, by the same token, the tendency of such men to drop one scientific problem for another, with no apparent regard for the potentialities of a worthwhile theme. In this group would naturally fall the physicians listed by Cabanés as *les évadés de la médecine,* doctors who have abandoned medicine for some other calling. In science, the versatile men, the explorers of untried fields were classed by Ostwald as Romanticists, those who never turn out a finished product, but leave behind them many loose ends for others to follow up and complete. One cannot blame Petit or Mestivier, for instance, if they did not repeat their risky operations on the mastoid (1736) or the appendix (1759), nor Baillarger if his clear perception of manic-depressive insanity as *folie à double forme* (1853-4) had to wait half a century for the conclusive synthesis of Kraepelin. But what of Dutrochet who made a clear statement of the cell theory (1824), fourteen years before Schleiden and Schwann (1838-9) and of

osmosis (1827-35) at least nineteen years before Graham (1854)? An examination of the vast output of this gifted investigator reveals the fact that, during the years of his scientific activity, Dutrochet was constantly switching from one important line of investigation to another and so failed to duplicate the advance he had made in osmosis or even to demonstrate his reasoning about the cell doctrine, which was more accurate, in its time, than that of either Schleiden or Schwann.[10] The great men of science in any country, however, are those who, like Paré or Laennec or Pasteur or Bernard, have displayed good generalship in developing a line of thought to its ultimate consequences.

F. H. GARRISON

[10]See, on this head, A. R. Rich: Bull. Johns Hopkins Hospital, Baltimore, 1926, XXXIX, 330-365, and J. Florian: Nature, London, 1932, CXXX, 634.